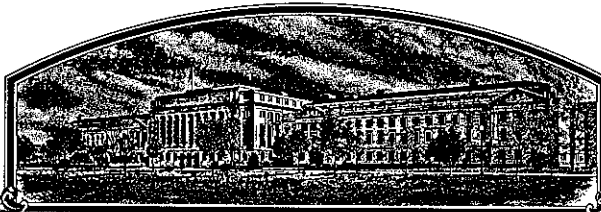


No.

8300139



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

## Asgrow Seed Company

Whereas, THERE HAS BEEN PRESENTED TO THE  
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'A3966'



In Testimony Whereof, I have hereunto set  
my hand and caused the seal of the Plant  
Variety Protection Office to be affixed  
at the City of Washington  
this 26th day of October in  
the year of our Lord one thousand nine  
hundred and eighty-four.

Attest

*Kenneth H. Evans*  
Commissioner

Plant Variety Protection Office  
Agricultural Marketing Service

*R. Block*  
Secretary of Agriculture

UNITED STATES DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION

FORM APPROVED  
OMB NO. 40-R3822

**APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE**

INSTRUCTIONS: See Reverse.

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY XP3865		1b. VARIETY NAME A3966		FOR OFFICIAL USE ONLY PV NUMBER <b>8300139</b>	
2. KIND NAME Soybean		3. GENUS AND SPECIES NAME Glycine max		FILING DATE 5/23/83	TIME 2:30 P.M.
4. FAMILY NAME (BOTANICAL) Leguminosae		5. DATE OF DETERMINATION October 1980		FEE RECEIVED \$ 1,000 \$ 500.00	DATE 5/23/83 10/11/84
6. NAME OF APPLICANT(S) Asgrow Seed Company		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) 9620-190-25 Gull Road, Bldg. 190 Kalamazoo, MI 49001		8. TELEPHONE AREA CODE AND NUMBER (616) 385-6605	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation			10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION Delaware		11. DATE OF INCORPORATION March 22, 1968
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: John A. Batcha, Asgrow Seed Company (9620-190-25), Gull Road, Bldg. 190, Kalamazoo, Michigan 49001					

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Novelty Statement.
- ☒ 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- ☐ 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.) ☐ YES ☒ NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?  
☐ YES ☐ NO

14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED?  
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? ☒ YES ☐ NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

May 12, 1983  
(DATE)

John A. Batcha  
(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)

EXHIBIT A  
ORIGIN and BREEDING HISTORY of the VARIETY

1972	Original cross made at Ames, Iowa. Parents : Williams X Essex Cross Number: Q327
1972-73 (fall)	10 F1 plants grown at Delray Beach, FL. under lighted conditions.
1973 (spring)	F2 Bulk population grown at Delray Beach, FL. Single pods picked from each plant.
1973(summer)	F3 bulk population grown at Ames, Ia. Single pod picks were made from each plant in population.
1974 (summer)	F4 bulk population grown at Ames, Ia..
1975	F5 bulk population was grown at Oxford, In.. Single plant selections were made and threshed individually.
1976	Plant rows were grown at Oxford and one of these, B76-3265 was bulk threshed for a preliminary yield test in 1977. This would become A3966.
1977	B76-3265 was entered in test P305 as code 45 and grown at 2 locations.
1977	B76-3265 was grown in S302 as code 36 at 7 locations across the Midwest.
1978-1980	B76-3265 was grown in strain tests in these years. It was segregating for flower color and single plant selections were made in 1979 and grown in hill plots in 1980 to purify the variety. 30 sublines that appeared identical for purple flower color were selected for a replicated progeny maintenance test in 1981. The experimental designation was changed to X3765P.
1981	X3765P was continued in performance trials and a separate maintenance (or replicated progeny row) trial was grown to produce pure breeder seed. Approximately 25 lines were bulked for breeder seed. The experimental designation was changed to XP3865.
1981-82	XP3865 was increased in Florida.
1982	XP3865 was further tested and increased. It was named A3966.

EXHIBIT A (continued)

Observations indicate A3966 is uniform and stable within commercially acceptable limits. As is true with other soybean varieties, a small percentage of variants or offtypes can occur within commercially acceptable limits, for almost any characteristic during the course of repeated multiplication.

Asgrow Seed Company  
PVP Application Soybean A3966  
May 1983

8300139

EXHIBIT B

To our knowledge A3966 most closely resembles the variety A3860. The characteristic which distinguishes A3966 from A3860 includes but is not necessarily restricted to flower color. A3966 has purple flower color while A3860 has white flowers.

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
LIVESTOCK, MEAT, GRAIN & SEED DIVISION  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MARYLAND 20705

EXHIBIT C  
(Soybean)

OBJECTIVE DESCRIPTION OF VARIETY  
SOYBEAN (*Glycine max* L.)

NAME OF APPLICANT(S) Asgrow Seed Company	TEMPORARY DESIGNATION XP3865	VARIETY NAME A3966
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) 7000 Portage Road Kalamazoo, MI 49001		FOR OFFICIAL USE ONLY PVPO NUMBER 8300139

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g.,   ).

## 1. SEED SHAPE:



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)  
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)

2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)  
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

## 2. SEED COAT COLOR: (Mature Seed)

1 = Yellow      2 = Green      3 = Brown      4 = Black      5 = Other (Specify) \_\_\_\_\_

## 3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

1 = Dull ('Corsoy 79'; 'Braxton')      2 = Shiny ('Nebsoy'; 'Gasoy 17')

## 4. SEED SIZE: (Mature Seed)

Grams per 100 seeds

## 5. HILUM COLOR: (Mature Seed)

1 = Buff      2 = Yellow      3 = Brown      4 = Gray      5 = Imperfect Black      6 = Black      7 = Other (Specify) \_\_\_\_\_

## 6. COTYLEDON COLOR: (Mature Seed)

*R/S 8/3/83*  
1 = Yellow      2 = Green

## 7. SEED PROTEIN PEROXIDASE ACTIVITY:

1 = Low      2 = High

## 8. SEED PROTEIN ELECTROPHORETIC BAND:

1 = Type A (SP1<sup>a</sup>)      2 = Type B (SP1<sup>b</sup>)

## 9. HYPOCOTYL COLOR:

1 = Green only ('Evans'; 'Davis')      2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')  
3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')  
4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

## 10. LEAFLET SHAPE:

1 = Lanceolate      2 = Oval      3 = Ovate      4 = Other (Specify) \_\_\_\_\_

## 11. LEAFLET SIZE:

☐ 21 = Small ('Amsoy 71'; 'A5312')  
3 = Large ('Crawford'; 'Tracy')

2 = Medium ('Corsoy 79'; 'Gasoy 17')

## 12. LEAF COLOR:

☐ 31 = Light Green ('Weber'; 'York')  
3 = Dark Green ('Gnome'; 'Tracy')

2 = Medium Green ('Corsoy 79'; 'Braxton')

## 13. FLOWER COLOR:

☐ 2

1 = White

2 = Purple

3 = White with purple throat

## 14. POD COLOR:

☐ 1

1 = Tan

2 = Brown

3 = Black

## 15. PLANT PUBESCENCE COLOR:

☐ 2

1 = Gray

2 = Brown (Tawny)

## 16. PLANT TYPES:

☐ 31 = Slender ('Essex'; 'Amsoy 71')  
3 = Bushy ('Gnome'; 'Govan')

2 = Intermediate ('Amcor'; 'Braxton')

## 17. PLANT HABIT:

☐ 3

1 = Determinate ('Gnome'; 'Braxton')

2 = Semi-Determinate ('Will')

3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

## 18. MATURITY GROUP:

☐ 61 = 000  
9 = VI2 = 00  
10 = VII3 = 0  
11 = VIII4 = I  
12 = IX5 = II  
13 = X

6 = III

7 = IV

8 = V

## 19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

## BACTERIAL DISEASES:

☐ 0Bacterial Pustule (*Xanthomonas phaseoli* var. *sojensis*)☐ 0Bacterial Blight (*Pseudomonas glycinea*)☐ 0Wildfire (*Pseudomonas tabaci*)

## FUNGAL DISEASES:

☐ 0Brown Spot (*Septoria glycines*)Frogeye Leaf Spot (*Cercospora sojina*)☐ 0

Race 1

☐ 0

Race 2

☐ 0

Race 3

☐ 0

Race 4

☐ 0

Race 5

☐

Other (Specify)

☐ 0Target Spot (*Corynespora cassicola*)☐ 2Downy Mildew (*Peronospora trifoliorum* var. *manshurica*)☐ 1Powdery Mildew (*Microsphaera diffusa*)☐ 1Brown Stem Rot (*Cephalosporium gregatum*)☐ 0Stem Canker (*Diaporthe phaseolorum* var. *caulivora*)

## 19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

## FUNGAL DISEASES: (Continued)

- ☐ Pod and Stem Blight (*Diaporthe phaseolorum* var. *sojae*)  
☐ Purple Seed Stain (*Cercospora kikuchii*)  
☐ Rhizoctonia Root Rot (*Rhizoctonia solani*)  
 Phytophthora Rot (*Phytophthora megasperma* var. *sojae*)  
☐ Race 1   ☐ Race 2   ☐ Race 3   ☐ Race 4   ☐ Race 5   ☐ Race 6   ☐ Race 7  
☐ Race 8   ☐ Race 9   ☐ Other (Specify) \_\_\_\_\_

## VIRAL DISEASES:

- ☐ Bud Blight (Tobacco Ringspot Virus)  
☐ Yellow Mosaic (Bean Yellow Mosaic Virus)  
☐ Cowpea Mosaic (Cowpea Chlorotic Virus)  
☐ Pod Mottle (Bean Pod Mottle Virus)  
☐ Seed Mottle (Soybean Mosaic Virus)

## NEMATODE DISEASES:

- Soybean Cyst Nematode (*Heterodera glycines*)  
☐ Race 1   ☐ Race 2   ☐ Race 3   ☐ Race 4   ☐ Other (Specify) \_\_\_\_\_  
☐ Lance Nematode (*Hoplolaimus Colombus*)  
☐ Southern Root Knot Nematode (*Meloidogyne incognita*)  
☐ Northern Root Knot Nematode (*Meloidogyne Hapla*)  
☐ Peanut Root Knot Nematode (*Meloidogyne arenaria*)  
☐ Reniform Nematode (*Rotylenchulus reniformis*)  
☐ OTHER DISEASE NOT ON FORM (Specify): \_\_\_\_\_

## 20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

- ☐ Iron Chlorosis on Calcareous Soil  
☐ Other (Specify) \_\_\_\_\_

## 21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

- ☐ Mexican Bean Beetle (*Epilachna varivestis*)  
☐ Potato Leaf Hopper (*Empoasca fabae*)  
☐ Other (Specify) \_\_\_\_\_

## 22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	A3860	NAME OF VARIETY A3966	CHARACTER	A3860	NAME OF VARIETY A3966
Plant Shape	bushy	bushy	Seed Coat Luster	dull	dull
Leaf Shape	ovate	ovate	Seed Size (gm/100)	18	16
Leaf Color	dk. green	dk. green	Seed Shape	spherical	spherical
Leaf Size	medium	medium	Seedling Pigmentation	green	purple



## 23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/POD
				CM Width	CM Length	% Protein	% Oil		
A3966 Submitted	143	2.8	109	13	9	39.8	21.2	18	3
A3860 Name of Similar Variety	141.5	3.0	104	13	9	41.6	20.7	16	3

## PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A<sub>2</sub> in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.